FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-3974
FACILITY NAME: Lampaert Meats, Inc.

TABLE OF CONTENTS

INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-3974. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of waste water to waters of the state of Washington. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the waste water, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.162) requires that a permit be issued before discharge of waste water to waters of the state is allowed. Regulations adopted by the state include procedures for issuing permits (Chapter 173-216 WAC), and water quality criteria for ground waters (Chapter 173-200 WAC). They also establish requirements which are to be included in the permit.

This fact sheet and draft permit are available for review by interested persons as described in Appendix A—Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response.

GENERAL INFORMATION	
Applicant	Lampaert Meats, Inc.
Facility Name and Address	Lampaert Meats, Inc. PO Box 82 17658 West Snoqualmie River Road NE Duvall, WA 98019
Type of Facility	Slaughterhouse
Type of Treatment	Septic Tank and Infiltration Drain Field
Discharge Location	Waterbody Name: Groundwater Latitude: 47° 45' 21" N. Longitude: 121° 59' 18" W.
Location of Application Area	Latitude: 47° 45' 21" N. Longitude: 121° 59' 18" W.
Contact at Facility	Name: Greg Giuliani, President Telephone #: (425) 788 1128
Responsible Official	Name: Greg Giuliani Title: President Address: 17658 West Snoqualmie River Road NE Duvall, WA 98019 Telephone #: (425) 788 1128

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

The Lampaert Meats facility is located in the Snoqualmie River Valley. The valley is an alluvial flood plain and the land is used for agriculture. The general drainage from the site is to the west.

The slaughter and processing building is located approximately thirty feet west of the Snoqualmie River. The bank of the river extends steeply downward approximately fifteen to twenty feet, before meeting the river. The plant is located on a raised area approximately ten feet above the normal level of the river. The area is well drained, except during severe flooding situations.

USDA soil survey maps have mapped the soils in the area of the Lampaert Meats facility, as a member of the Pilchuck series. Soils of the Pilchuck series are characterized as excessively well drained soils. A representative soil profile is composed of dark-gray fine sand and loamy fine sand to a depth of about 38 inches. Below this layer is a dark-gray to black gravelly sand that extends to a depth of 60 inches or more.

INDUSTRIAL PROCESSES

The applicant is engaged in the slaughter and processing of bovine animals for food purposes. The facility specializes in the processing of veal, although a significant proportion of other animals such as adult cattle, sheep, and goats have been processed in some past years. In 1999, the year prior to the issuance of the existing permit, approximately 10,000 calves were slaughtered at the facility. In 2003, less than 150 calves were slaughtered in a typical week.

Animals are received by truck and unloaded into a holding pen. The holding pen area is covered, and is graded in such a way as to prevent direct runoff to the Snoqualmie River.

The animal is stunned (slaughtered), eviscerated, chilled in a cooler, deboned, and then frozen. Cleanup is performed at the end of the day.

The kill room has a large drain which receives the blood resulting from slaughtering operations. Following slaughtering operations, the kill room floor is hosed down with water. The initial rinse water is discharged to the blood tank and does not go to the leach field. This relatively concentrated blood solution is trucked to a renderer. The remaining rinses, consisting of dilute blood solution, are drained to a septic tank and drain field.

TREATMENT PROCESSES

A leach field on the north side of the building, consisting of drain tiles (perforated clay pipe) receives all domestic flow at this time.

This leach field is located mainly under a parking area which is partially paved. Washdown water consisting of the dilute blood rinses from the kill room floor and washdown water from the butchering areas is discharged to a septic tank and leach field located on the south side of the building. The leach field is located at an elevation approximately 15 feet above the water table during normal river flows. The leach field is located approximately sixty feet west of the Snoqualmie River. Process wastewater flows from the building are routed through a grease trap prior to being directed to the septic tank.

DISTRIBUTION SYSTEM

According to plans submitted by the applicant, the leach field on the south side of the building consists of three-each fifty foot drain tile pipes and three-each one hundred foot drain tile pipes located on ten-foot centers. The total area of the drain field is approximately 5000 square feet. The Permittee's consultant has observed that the drain field is located in silty soil. The USDA King County Soil Survey characterizes the soil at the site as a loamy fine sand from the ground surface to about 38 inches below the ground surface. There is no data available at this time regarding the cross-sectional details of the drain field—specifically the nature and dimensions of any gravel or porous fill, if any, located in the trenches. Prior to the issuance of the existing permit, the Department's hydrogeologist performed a calculation regarding the adequacy of the drain field, based on domestic practice, and concluded that although the drain field may possibly be adequate, its size is somewhat marginal for the disposal of 3,000 gallons per day. At the time of the drafting of the proposed permit, the maximum daily flow had been reduced to approximately 1000 gallons per day. The Department has inspected both drain fields on the property during the wet season and has not noted any evidence of standing water or unusual odors.

GROUND WATER

The abridged engineering report submitted by Stuth Company, Inc., contained the observation that the drain field was located on silty soil which "will provide both treatment and disposal." The same report also referred to the soils in the area as being "silt to silty loam." The report also contained reference to a USEPA study which indicated that a typical residential septic system will discharge total coliform units in the range of 10E10 to 10E12. The consultant's report also referred to a state of Florida Department of Health and Rehabilitative Services which indicated azero fecal coliform and fecal streptococcus bacteria from residential septic tank effluent after traveling through two feet of fine sandy soil. The geologist indicated in the report that a finer soil, such as the loamy/silty loam conditions under the Permittee's drain field could be expected to result in more effective removal of micro-organisms than the sandy soil referred to in the Florida study, and that a "potential impact on ground water from coliform bacteria is unlikely." The report also noted that King County Code requires a 100-foot setback from a domestic water supply well, and indicated that the nearest known such well was located approximately 700 feet to the south. The report also contained the observation that the site is located in the midst of a dairy/grazing area. The Department acknowledges that the effect of the many tons of fresh fecal matter deposited daily by cattle in nearby fields would be expected to have an environmental effect which would dwarf any effect caused by the drain field.

The site was most recently inspected on April 8, 2004, by the Department's permit manager and the Department's hydrogeologist. The Department's hydrogeologist maintained significant doubt as to whether the Pilchuck series loamy fine sand to gravelly sand, over which the perforated pipe lies, would be effective in achieving significant removal of the pollutants of concern prior to the leachate reaching the water table (top of the shallowest aquifer/saturation zone). This soil, in this series, is characterized in the USDA soil survey as being "excessively drained." Excessively drained soils are commonly very porous, have low runoff, and low available water (holding) capacity. Their permeability is rapid with an infiltration rate of 6.3 to 20 inches per hour. The primary pollutants of concern are coliform bacteria and nitrates/nitrites.

There is also some potential for the waste water to exceed groundwater standards for total dissolved solids and chloride. Blood contains high concentrations of dissolved solids, chiefly as sodium ions, potassium ions, and chlorides. It has not been determined whether the dilute blood in the waste water from this site possesses sufficiently high total dissolved solids concentrations to result in exceedances of the groundwater standard for total dissolved solids.

PERMIT STATUS

The original permit for this facility was issued on July 17, 1984, and expired on July 17, 1989. A letter was issued on July 12, 1989, granting an extension of the original permit. A permit was reissued to the facility on June 30, 1994, with an expiration date of June 30, 1999. That permit was modified on May 31, 1995, to require submittal of a drainfield inspection report no later than April 15, 1996. The permit modification also authorized collection of grab sample for certain parameters, and included a change in the monitoring frequency to quarterly for oil and grease, as opposed to the original monthly sampling frequency. On December 26, 1996, the permit was modified to increase the flow limitation from 1200 gallons per day to 3000 gallons per day. This modification was performed on the basis of the abridged engineering report described in greater detail above. A permit extension letter was issued for the permit on June 22, 1999.

The existing permit for Lampaert Meats was issued on January 22, 2000, with an expiration date of June 30, 2004.

An application for permit renewal was submitted to the Department on December 22, 2003, and accepted by the Department on December 29, 2003.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on April 8, 2004. There was no indication of pooling or runoff from the drain field observed during that inspection.

Lampaert Meats was inspected on March 17, 1999. At that time, the Department's representatives could find no evidence of pooling or runoff of process water from the drain field. Some sinewy/fatty material was noted in the sump leading to the south drain field. The Department also looked for signs of discharge of process water from storm drains around the facility. We did identify some evidence of animal product material in a storm sump located northwest of the building. The possible source of this material was discussed with Mr. Giuliani, who theorized that the hosing down of the front office, where workers track some slaughter house material on their shoes, might be a possible source of the waste material. Following the inspection, the Department's hydrogeologist concluded that, based on analogy with treatment of domestic waste water, the existing drain field might be sufficient for disposal of this plant's waste water. However, he also performed some calculations which suggested that the existing leach field may be marginal. Based on this finding, he recommended that details of the construction of the drain field be ascertained, and that a hydrogeologist or engineer should use the additional information to determine the adequacy of the specific properties of the Lampaert Meats process waste water. This is the basis for the addendum to the engineering report contained in the permit issued on January 20, 2000.

During the history of the existing permit, the Permittee has remained in compliance with discharge standards based on discharge monitoring reports (DMRs) and other reports submitted to the Department and inspections conducted by the Department. However, the permit only contains limitations for flow and BOD_5. In addition, a review of discharge monitoring reports indicates a failure to report values for BOD_5, TKN, and oil and grease for Q1 through Q4 of 2001, Q1 through Q3 of 2002, and Q1 through Q2 and Q3 of 2003. Therefore, the history of compliance with permit limitations is based on a very limited data set.

The proposed permit contains limitations for fecal coliform, nitrate/nitrite, TDS, and chloride. The permit issued previously to the existing permit required monitoring for fecal coliform in the waste water. The information generated from that monitoring indicated exceedance of fecal coliform groundwater standards by water exiting the septic tank.

WASTEWATER CHARACTERIZATION

The concentration of pollutants as reported in discharge monitoring reports submitted to the Department is shown in the table below. The sample point for the concentration-based parameters is at a point following the septic tank and prior to introduction to the south leach field piping.

LAMPAERT MEATS
WASTEWATER CHARACTERIZATION BASED ON
DISCHARGE MONITORING REPORTS
SUBMITTED FOR DECEMBER 2000 THROUGH MARCH 2003

Parameter	Minimum	Average	Maximum
Flow, gallons per day	504	946	1371
BOD_5, mg/L	270	345	420
TKN, mg/L	6.8	9.4	12
Oil and Grease, mg/L	2.4	3.4	4.4

SEPA COMPLIANCE

The proposed permit consists of a permit renewal for an existing discharger. Therefore, completion of a SEPA checklist is not required.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be either technology- or water quality-based. Waste water must be treated using all known, available and reasonable treatment (AKART) and not pollute the waters of the state. Water quality-based limitations are based upon compliance with the ground water quality standards (Chapter 173-200 WAC).

The more stringent of the water quality-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment (AKART) of discharges to waters of the state (WAC 173-216-110). At this site, it is anticipated that any treatment which results in compliance with groundwater quality-based standards, will also be consistent with the requirement for AKART.

GROUND WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's ground waters including the protection of human health, WAC 173-200-100 states that waste discharge permits shall be conditioned in such a manner as to authorize only activities that will not cause violations of the ground water quality standards. Drinking water is the beneficial use generally requiring the highest quality of ground water. Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial uses.

Applicable ground water criteria as defined in Chapter 173-200 WAC and in RCW 90.48.520 for this discharge include the following:

Groundwater Criteria of Pollutant Parameters of Concern for Discharge from Lampaert Meats

Pollutant Parameter	Groundwater Criteria
Total Coliform Bacteria	1 Colony/100 mL
Total Dissolved Solids	500 mg/L
Chloride	250 mg/L
Nitrate	10 mg/L

The Department has reviewed existing records and is unable to determine if background groundwater quality is either higher or lower than the criteria given in Chapter 173-200 WAC. Therefore, the Department will use the criteria expressed in the regulation in the proposed permit. The discharges authorized by this proposed permit are not expected to interfere with beneficial uses.

Pollutant concentrations in the proposed discharge may exceed groundwater quality criteria. A limit based on groundwater criteria is established and applied at the end of treatment.

No valid upgradient background data were available for the pollutants of concern. If the Permittee is unable to meet groundwater criteria at the sample point established in this permit, the Permittee has a number of options:

- Evaluation of the background (upgradient) groundwater quality for the purpose of adjusting the limitation in accordance with Chapter 173-200 (if justified) by drilling an upgradient well and sampling from that well;

- Disinfection following any biological treatment;

- Improvement of wastewater treatment;
- Establishment of an alternate point of compliance point by drilling an upgradient well; and
- Hauling of all wastewater off-site.

This information may result in a permit modification or limits in the next renewal.

COMPARISON OF PROPOSED LIMITATIONS WITH THOSE IN THE EXISTING PERMIT ISSUED JANUARY 20, 2000

Final limitations in the existing and proposed permits are shown in the table below. Limitations and monitoring requirements are proposed to be added for nitrates and nitrites, total dissolved solids, and chloride. Monitoring requirements and limitations are proposed to be removed for oil and grease, but added for total coliform bacteria.

Comparison of Limitations in the Existing Permit With Final Proposed for the New Permit		
Parameter	**Existing Limits**	**Proposed Final Limits**
Flow, gallons per day	3000	3000
BOD_5, mg/L	600	N/A
TKN (mg/L)	N/A	N/A
Oil and Grease, mg/L	100	N/A
Nitrites and Nitrites (as N)	N/A	10 mg/L
Total Dissolved Solids	N/A	500 mg/L
Chloride	N/A	250 mg/L
Total Coliform	N/A	1 per 100 mL

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, that groundwater criteria are not violated, and that effluent limitations are being achieved (WAC 173-216-110).

WASTEWATER MONITORING

The monitoring schedule is detailed in the proposed permit under Conditions S1 and S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Monitoring for BOD_5 and TKN is being required to further characterize the effluent. These pollutants could have a significant impact on the treatment of the waste water, and ultimately, the quality of the ground water.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110).

OPERATIONS AND MAINTENANCE

The proposed permit contains Condition S.5 as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

SOLID WASTE PLAN

Viscera and bone waste resulting from slaughter operations are placed in impermeable plastic barrels, which are hauled on a semi-weekly basis, by truck, to the rendering plant.

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

The existing permit requires that the Permittee submit a solid waste control plan to the Department no later than October 15, 2000. This proposed permit requires, under the authority of RCW 90.48.080, that the Permittee update the solid waste plan designed to prevent solid waste from causing pollution of the waters of the state and submit it to the Department.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to groundwater permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending, or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes, or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the payment of permit fees. Condition G10 describes the penalties for violating permit conditions.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, and to protect human health and the beneficial uses of waters of the state of Washington. The Department proposes that the permit be issued for such a period as to result in its expiration on June 30, 2009.

REFERENCES FOR TEXT AND APPENDICES

Soil Survey, King County Area, Washington, USDA Soil Conservation Service in cooperation with the Washington Agricultural Experiment Station and King County Soil Conservation Service, November 1973

Faulkner, S.P., Patrick Jr., W.H., Gambrell, R.P., May-June 1989. Field Techniques for Measuring Wetland Soil Parameters, Soil Science Society of America Journal, Vol. 53, No. 3.

Washington State Department of Ecology, 1993. Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems, Ecology Publication # 93-36. 20 pp.

Washington State Department of Ecology.

Laws and Regulations (http://www.ecy.wa.gov/laws-rules/index.html)

Permit and Wastewater Related Information (http://www.ecy.wa.gov/programs/wq/wastewater/index.html)

Washington State Department of Ecology, 1996. Implementation Guidance for the Ground Water Quality Standards, Ecology Publication # 96-02.

Washington State University, November 1981. Laboratory Procedures - Soil Testing Laboratory. 38 pp.

APPENDICES

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on June 23, 2004, and June 30, 2004, in the *Snoqualmie Valley Record* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department published a Public Notice of Draft (PNOD) on June 23, 2004, and June 30, 2004, in the *Snoqualmie Valley Record* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to:

Water Quality Permit Coordinator
WA State Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, 425-649-7201, or by writing to the address listed above.

APPENDIX B—GLOSSARY

Ambient Water Quality—The existing environmental condition of the water in a receiving water body.

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in waste water. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect waste water.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5—Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of the collection or treatment facility.

Compliance Inspection - Without Sampling—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling—A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity—Clearing, grading, excavation, and any other activity which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Continuous Monitoring—Uninterrupted, unless otherwise noted in the permit.

Distribution Uniformity—The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

Engineering Report—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade, or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)—The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)—A calculated value five times the MDL (method detection level).

Soil Scientist—An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5, 3, or 1 year(s), respectively, of professional experience working in the area of agronomy, crops, or soils.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids—That portion of total solids in water or waste water that passes through a specific filter.

Total Suspended Solids (TSS)—Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent pollution of the receiving water.